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AZ CORP COMMISSION  
DOCKET CONTROL

**BEFORE THE ARIZONA CORPORATION COMMISSION**

**COMMISSIONERS**

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BOB STUMP  
BOB BURNS  
TOM FORESE  
DOUG LITTLE

**ORIGINAL**

Arizona Corporation Commission

**DOCKETED**

MAR 06 2015

DOCKETED BY

IN THE MATTER OF THE APPLICATION OF  
INDIADA WATER COMPANY, INC., FOR  
APPROVAL OF A PERMANENT INCREASE  
IN ITS WATER RATES.

DOCKET NO. W-02031A-10-0168

IN THE MATTER OF THE APPLICATION OF  
ANTELOPE RUN WATER COMPANY FOR  
APPROVAL OF A PERMANENT INCREASE  
IN ITS WATER RATES.

DOCKET NO. W-02327A-10-0169

IN THE MATTER OF THE APPLICATION OF  
BOB B. WATKINS DBA EAST SLOPE  
WATER COMPANY FOR APPROVAL OF  
ITS PERMANENT INCREASE IN ITS  
WATER RATES.

DOCKET NO. W-01906A-10-0170

IN THE MATTER OF THE APPLICATION OF  
BOB B. WATKINS DBA EAST SLOPE  
WATER COMPANY, INDIADA WATER  
COMPANY, INC., AND ANTELOPE RUN  
WATER COMPANY FOR APPROVAL OF A  
TRANSFER OF ASSETS AND  
CERTIFICATES OF CONVENIENCE AND  
NECESSITY.

DOCKET NO. W-01906A-10-0171  
DOCKET NO. W-02031A-10-0171  
DOCKET NO. W-02327A-10-0171

1 IN THE MATTER OF THE APPLICATION OF  
2 BOB B. WATKINS DBA EAST SLOPE  
3 WATER COMPANY FOR AUTHORITY TO  
INCUR LONG-TERM DEBT.

DOCKET NO. W-01906A-10-0183

4 IN THE MATTER OF THE APPLICATION OF  
5 INDIADA WATER COMPANY, INC. FOR  
6 AUTHORITY TO INCUR LONG-TERM  
DEBT.

DOCKET NO. W-02031A-10-0184

7 IN THE MATTER OF THE APPLICATION OF  
8 ANTELOPE RUN WATER COMPANY FOR  
9 AUTHORITY TO INCUR LONG-TERM  
DEBT.

DOCKET NO. W-02327A-10-0185

**EAST SLOPE WATER  
COMPANY'S APPLICATION  
TO AMEND DECISION NO.  
73091**

12  
13 Pursuant to A.R.S. § 40-252, the East Slope Water Company ("Company") hereby  
14 moves the Arizona Corporation Commission ("Commission") to amend Decision No.  
15 73091 by modifying certain dates relating to financing proposed improvements and  
16 approve proposed revisions to the proposed scope of work.

17 **Factual Background**

18 On April 10, 2012, in Decision No. 73091, the Commission authorized the  
19 consolidation of three separate water companies into one, the East Slope Water  
20 Company. The primary reason for consolidation was to enable the Company to incur  
21 debt to make much needed capital improvements, which were attached to the order as  
22 Exhibit B. The Commission approved the proposed financing. Consistent with common  
23 practice, the Commission ordered that the debt authorization would terminate on  
24 December 31, 2014. *See* Decision at p. 42, lines 5-6. The Commission further ordered  
25 that the Company had to file Approvals of Construction to show that the capital  
26 improvements had been completed by no later than that same date. *See id.* at p. 43, lines  
27 6-9.  
28

## **Intervening Factors**

Unfortunately, when the Company initiated the process to secure financing from the Water Infrastructure Finance Authority ("WIFA"), environmentalist interests objected to the improvements. The environmentalists argue that the well rehabilitation or replacement work adversely impact the San Pedro River. The Company believes there is no merit to these claims. First, the proposed wells projects are intended to benefit existing customers who often face water curtailments due to the lack of water production due to failing wells. More importantly, the proposed wells are more than 9 miles away from the San Pedro River and the water table tapped by the proposed wells is up gradient from the river. Thus, any argument that the proposed wells are pulling water from the San Pedro River defies common sense.

Nevertheless, WIFA has taken a cautious approach and has tried to accommodate both the Company and the environmentalists. Recognizing the predicament and attempting to resolve the issues, the Company's engineers made several revisions to the proposed improvement plans so WIFA's staff might approve the project without requiring the Company undergo a National Environmental Policy Act ("NEPA") a Environmental Assessment, which is an expensive and time-consuming process. In mid-February 2015, however, WIFA concluded that any well improvements would require an Environmental Assessment rather than receiving a categorical exclusion. While this process was ongoing, the Company owner Bob Watkins passed away. These issues have delayed the Company's ability to enter into a loan agreement with WIFA and complete the projects.

## **Action Requested**

Therefore, the Company requests that the Commission approve the revised project work as described in Attachment 1 and extend the deadlines for project completion. The Company proposes that the Commission extend the deadline for debt authorization and project completion from December 31, 2014 to December 31, 2016. These revisions should be sufficient to enable the Company to enter into a WIFA loan without subjecting

1 the Company to the NEPA process and allow the Company the time to make necessary  
2 system improvements.

3 RESPECTFULLY SUBMITTED this 6<sup>th</sup> day of March, 2015.

4  
5 **MOYES SELLERS & HENDRICKS LTD.**

6  
7 

8 Steve Wene

9  
10 Original and 13 copies of the foregoing  
11 filed this 6<sup>th</sup> day of March, with:

12 Docket Control  
13 Arizona Corporation Commission  
14 1200 West Washington  
15 Phoenix, Arizona 85007

16  
17 



# **ATTACHMENT 1**

## MEMORANDUM

**Prepared for:** Keith Dojaquez, East Slope Water Company  
c/o Southwestern Utility Management, Inc.

**Prepared by:** Kara D. Festa, P.E., WestLand Resources, Inc.

**cc:** Bonnie O'Connor, East Slope Water Company  
Erik D. Christenson, P.E., WestLand Resources, Inc.

**Date:** November 5, 2014 (Revised December 22, 2014)

**Project No.:** **EAST SLOPE WATER COMPANY WATER SYSTEM EVALUATION  
SUPPLEMENT  
WESTLAND PROJECT NO. 1820.01**



EXPIRES 3/31/2017

### 1. INTRODUCTION

WestLand Resources, Inc. (WestLand) has prepared this memorandum to outline the water system evaluation of the Main and West systems of the East Slope Water Company (ESWC), describe the recommended projects, and provide construction cost estimates for the projects identified for the Water Infrastructure Finance Authority (WIFA) funding. This memo is an addendum to the Water System Evaluation prepared by WestLand in January 2014. The East Slope Water Company consists of two separate water systems – the Main Water System (MWS) and West Water System (WWS), which currently serve approximately 750 and 230 customers, respectively.

### 2. FACILITY SIZING CRITERIA

The engineering criteria utilized for the water system analysis and infrastructure sizing is presented in the following sections.

#### 2.1. DEMAND AND PEAKING FACTORS

Water demand and peaking factors utilized for the evaluation are presented in the following sections. Equivalent dwelling units (EDUs) for water meters larger than 3/4-inch are used for the calculation of system demand per American Water Works Association Manual M6.

##### Main System:

- Average daily water usage for a single-family residential..... 315gpd/EDU
- Ratio of average day of the peak month (ADPM) to average day ..... 1.55
- Ratio of peak day demand (PDD) to average day..... 2.2
- Ratio of peak hour demand (PHD) to average day ..... 3.9

### West System:

- Average daily water usage for a single-family residential .....400 gpd/EDU
- Ratio of average day of the peak month (ADPM) to average day ..... 1.75
- Ratio of peak day demand (PDD) to average day ..... 2.5
- Ratio of peak hour demand (PHD) to average day ..... 4.4

\*Maximum instantaneous demand for individual areas serving small numbers of customers per Arizona Department of Environmental Quality (ADEQ) Engineering Bulletin No. 10, Table 3

Based on the demand criteria and EDU estimates for each water system, the calculated demands of each water system are provided in *Tables 1 and 2*. These projections include committed demands within the water systems, and assume that minor infill will occur in both systems.

**Table 1. Main Water System**

Main System	EDU	ADD (gallons)	ADD (gpm)	ADPM (gallons)	PDD (gpm)	PHD (gpm)
Total	1,197	377,055	262	584,435	576	1,021

**Table 2. West Water System**

West System	EDU	ADD (gallons)	ADD (gpm)	ADPM (gallons)	PDD (gpm)	PHD (gpm)
Total	265	106,000	74	265,000	184	324

## 2.2. WELL SUPPLY

The existing systems are served entirely by groundwater wells. As a design goal, the wells shall provide sufficient capacity to meet the peak daily demand (PDD) of the water system, with the largest well out of service (redundant supply). To the extent that an emergency backup or other alternative source of supply is available for the water system, this source may be considered as an alternative to the well redundancy requirement.

## 2.3. BOOSTER STATION CAPACITY

Booster capacity to service areas without elevated storage shall meet instantaneous demand. Since these systems have not historically provided fire flow, no capacity for fire flow will be included in the booster station capacity calculations. Peak hour demand (PHD) or maximum instantaneous demand from ADEQ Engineering Bulletin No. 10, Table 3 will be used for booster station capacity requirements. Boosters shall be equipped with hydropneumatic tanks and/or variable frequency drives (VFDs) to dampen water system transients (water hammer) during pump cycling.

## 2.4. STORAGE

Water system reservoir storage capacity is a critical element in the design and operation of water systems. Storage is used primarily to accommodate short-term fluctuations in demands, such that well capacity

does not have to meet peaking demands. The advantages of having storage capacity include operational and production flexibility, reduced cycling time for production facilities, greater system reliability, and reduction in well capacity requirements.

ADEQ rules for public water system capacity are based on Arizona Administrative Code, Title 18, Chapter 5, Article 5, Minimum Design Criteria, (AAC R18-5-509), and state that the minimum storage requirements shall be equal to average daily demand during the peak month of the year (ADPM) plus capacity for fire flow requirements. The minimum storage capacity for a multiple-well system that serves a residential population or a school may be reduced by the amount of the total daily production capacity minus the production from the largest producing well; however, utilization of these criteria for storage capacity calculations is not recommended unless well capacity comfortably exceeds PDD. The criteria for the evaluation of storage capacity are as follows:

- Provide storage volume equal to the ADPM.
- Since these systems have not historically provided fire flow, no capacity for fire flow will be included in the storage calculations, except for the amount of storage capacity referenced in the development agreement documents for the improvements constructed for the Rancho San Pedro development.

## **2.5. DISTRIBUTION SYSTEM**

Pipeline design within the distribution system is based upon the following criteria:

- System design and construction shall meet American Water Works Association (AWWA) and ADEQ requirements.
- Transmission lines serving PDD only shall be designed for a maximum velocity of 5 feet per second (ft/sec) with a minimum pressure of 35 pounds per square inch (psi). At no time shall the system piping have a maximum velocity greater than 10 ft/sec or a pressure less than 20 psi.
- Maximum friction head loss for lines up to and including eight (8) inches in size is to be eight (8) ft per 1,000 ft or less. Head loss for lines between eight (8) and ten (10) inches in size is to be five (5) ft per 1,000 ft or less.

## **2.6. MAIN WATER SYSTEM CAPACITY EVALUATION AND PROPOSED IMPROVEMENTS**

Based on the review of water system demands, infrastructure capacities, and hydraulic modeling, there are a number of recommendations for upgrades to the MWS, as discussed in the following sections. The recommendations discussed in this section are presented on **Figure 1**. Opinions of Probable Construction Cost (OPCCs) are provided in **Appendix A**. Costs include engineering, permitting, construction services, and contingencies.

## **2.7. MWS PRESSURE ZONES**

The Main Pressure Zone and Rancho San Pedro (RSP) water system areas are currently operated at slightly different highwater elevations, due to the different elevation ranges associated with the two areas.

Although it would be ideal to operate the entire water system as a single pressure zone, the elevation range across the entire water system would result in increased pressures in lower areas of the MWS, as well as increased pressure for many customers who previously did not have excessive pressures. This condition could result in issues with pipeline breaks in the older areas of the water system. It is recommended that the two areas of the water system continue to be operated as separate pressure zones, but that a permanent interconnect with a pressure reducing valve (PRV) station be installed between the RSP and Main Pressure Zone areas, to take advantage of well, tank, and booster station capacity within the RSP area.

## 2.8. MWS WELL CAPACITY

The Main Pressure Zone of the MWS currently has five wells, although not all wells are available at their full capacity for full-time operation. The RSP area has an additional four wells, of which three are operational and available to fill the storage tank on that site. The well source evaluation for the MWS is presented in *Table 3*.

**Table 3. Well Capacity Evaluation - Main System**

Description	Well Requirement PDD (gpm)	Existing Well Capacity (gpm)	Additional Well Capacity Needed (gpm)
Total	576	457	319**

\* The well capacity presented represents the assumed effective capacity of Well No. 1 of 25 gpm.

\*\* Includes reserve capacity equal to the capacity of largest well, or 200 gpm

The current well capacity for the MWS is not sufficient to adequately meet demands and redundancy requirements; however, no well projects are proposed at this time.

## 2.9. MWS STORAGE CAPACITY

The total storage capacity of the MWS is approximately 474,000 gallons with one 50,000-gallon storage tank at Well Site No. 2, one 212,000-gallon storage tank at Well Site No. 3, and one 212,000-gallon storage tank within RSP. The storage capacity evaluation for the MWS is presented in *Table 4*. Although there is a shortage of capacity for the MWS, construction of new storage facilities is not proposed at this time.

**Table 4. Storage Capacity Evaluation - Main System**

Description*	Storage Requirement ADPM (gallons)	Existing Storage Capacity (gpm)	Additional Storage Capacity Needed (gpm)
Total	589,435	474,000	115,435

## 2.10. MWS BOOSTER STATION CAPACITY

The MWS operates as a pressure-controlled system, without being floated by tanks at a high water elevation. Therefore, the storage tanks are accompanied by a booster station to pressurize the stored water for service to customers. The MWS is supplied by two booster stations at MWS Wells No. 2 and 3, and

by one booster station in the RSP area. The booster station capacity evaluation is presented in **Table 5**. Booster station capacity is currently sufficient, and construction of new booster station facilities is not proposed at this time.

**Table 5. Booster Station Capacity Evaluation - Main System**

Description	Booster Station Requirement PHD (gpm)	Existing Booster Station and Well Supply Capacity (gpm)*	Excess Booster Station Capacity (gpm)
Total	1,021	1,700	879

\* The capacity of Well No. 4 is included with booster station capacity, as this well delivers directly into the water system.

## **2.11. MWS DISTRIBUTION SYSTEM**

The review of the existing water system and hydraulic modeling evaluation resulted in recommendations for water main projects within the MWS as shown on **Figure 1**. The existing water system has numerous sections of undersized water mains, which contribute to regular pressure problems in various portions of the water system, especially during peak demand periods. These issues occur regularly, and are especially problematic during well outages when water from one area of the system needs to be moved to other areas. In addition, these water mains do not meet current water system capacity standards, and often are not constructed of standard water system materials meeting current engineering and sanitary requirements. Pipeline looping, interconnection, and main replacement projects proposed for the MWS total approximately 12,700 linear feet of water main. These installations will take place in existing disturbed rights-of-way.

## **3. WEST WATER SYSTEM CAPACITY EVALUATION AND PROPOSED IMPROVEMENTS**

Based on the review of water system demands, infrastructure capacities, and hydraulic modeling, there are a number of recommendations for upgrades to the WWS, as discussed in the following sections. The recommendations discussed in this section are presented on **Figure 2**. Opinions of Probable Construction Cost (OPCCs) are provided in **Appendix A**. Costs include engineering, permitting, construction services, and contingencies.

### **3.1. WWS PRESSURE ZONES**

The WWS is currently operated as three separate water zones, due to the elevation ranges across the water system. No changes are proposed to the pressure zone layout at this time, although a new floating storage tank is proposed for the South Zone area.

### **3.2. WWS WELL CAPACITY**

The WWS is currently being served by two wells under many circumstances, although there are a total of five wells in the overall area of the WWS. Several of the wells have a tendency to dry up in low rainfall periods. The well source evaluation for the WWS is presented in **Table 6**.

**Table 6. Well Capacity Evaluation – West System**

Description	Well Requirement PDD (gpm)	Existing Well Capacity (gpm)	Additional Well Capacity Needed (gpm)
Total	184	155	119

\* The existing well capacity also includes 60 gpm of capacity from Indiada Well Nos. 2, 3 and 4; however, this capacity is not reliable in the summer. This capacity needs to be replaced by other source capacity.

\*\* Includes reserve capacity equal to the capacity of largest well, or 90 gpm.

The current well capacity for the existing WWS is not sufficient to adequately meet existing demands and redundancy requirements; however, no well projects are proposed at this time.

The water company proposes to install an emergency interconnect from the adjacent Pueblo Del Sol (PDS) Water Company. This project would consist of approximately 1,400 feet of 6-inch pipeline to deliver water from PDS Water Company to East Slope West System. This installation will take place in existing disturbed rights-of-way and easements.

### **3.3. WWS STORAGE CAPACITY**

The total storage capacity of the WWS is approximately 29,000, with a 17,000-gallon storage tank at the Antelope Run Booster Station site, and a 12,000-gallon storage tank at the Indiada Well No. 2 site. The storage capacity evaluation for the WWS is presented in *Table 7*.

**Table 7. Storage Capacity Evaluation - West System**

Description	Storage Requirement ADPM (gallons)	Existing Storage Capacity (gpm)*	Additional Storage Capacity Needed (gpm)
Total	265,000	17,000	248,000

The current storage capacity in the WWS is not sufficient to meet typical storage requirements or satisfy existing water system demands. A new storage tank is proposed at the existing Water Plant No. 2 site to improve water system storage capacity. The purpose of the project is to provide a location for storage of pumped water for purposes of meeting hourly peak demands, and to float the South Zone of the water system from the new tank. Due to property constraints, the existing 12,000 gallon storage tank at that site will be replaced with a tank of approximately 100,000 gallon capacity. The final tank size is dependent on the actual tank configuration that can fit and be permitted on the existing site.

The tank project will also include the installation of approximately 2,100 linear feet of 6-inch water main, to connect the new tank to the South Zone of the water system. The new water main will run parallel to an existing water main. The existing water main will be left in place to serve the area in the immediate vicinity of the tank site using an existing booster station. This installation will take place in existing disturbed rights of way and easements, and at an existing disturbed site.

### **3.4. WWS BOOSTER STATION CAPACITY**

The WWS currently operates as a pressure controlled system, without being floated by storage tanks. Therefore, the two storage tanks are each accompanied by a booster station to serve the stored water to customers at sufficient pressure. The Antelope Run Booster Station draws from the Antelope Run Tank to serve the South Zone of the water system. The IWS Well No. 2 Booster draws from the IWS Well No. 2

tank to feed seven lots at the extreme southwestern and highest elevation in the West water system. The booster station capacity evaluation is presented in *Table 8*.

**Table 8. Booster Station Capacity Evaluation - West System**

<b>Description</b>	<b>Booster Station Requirement Maximum Instantaneous (gpm)</b>	<b>Existing Booster Station* Capacity (gpm)</b>
North Zone*	105	155
South Zone	220	220
Hilltop Zone	33	40

\* North Zone is served by the existing wells, which pump directly to the system.

The current booster station capacity in the WWS is not sufficient to adequately transfer water, meet peaking demands, and provide redundancy. The existing Antelope Run Booster Station and hydropneumatic tank will be upgraded to provide capacity sufficient for serving the demands of the South Zone with proper redundancy. This installation will take place at an existing disturbed site.

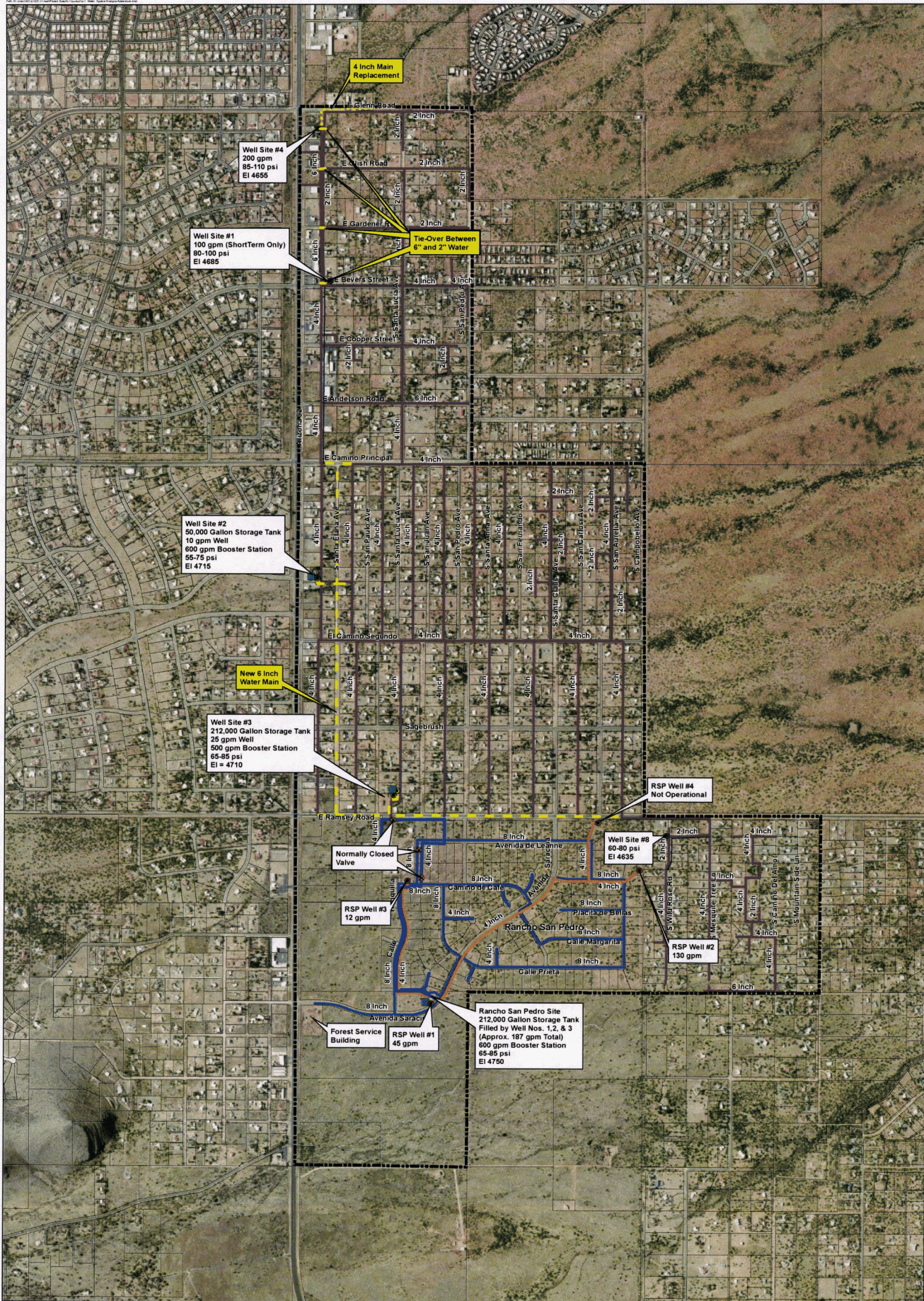
### **3.5. WWS DISTRIBUTION SYSTEM**

Similar to the MWS, the WWS contains mostly small diameter existing pipelines and lacks proper looping. The review of the existing water system and hydraulic modeling evaluation resulted in recommendations for water main projects within the WWS as shown on *Figure 2*. One section of approximately 300 linear feet of 4-inch water main is proposed in the West System, to loop together two dead end mains for purposes of improving flow transfer capabilities and pressures within the West System. As previously described, the pipeline interconnection to PDS Water Company, and storage tank replacement projects also include pipeline installations. These installations will take place in existing disturbed rights-of-way.



## FIGURES

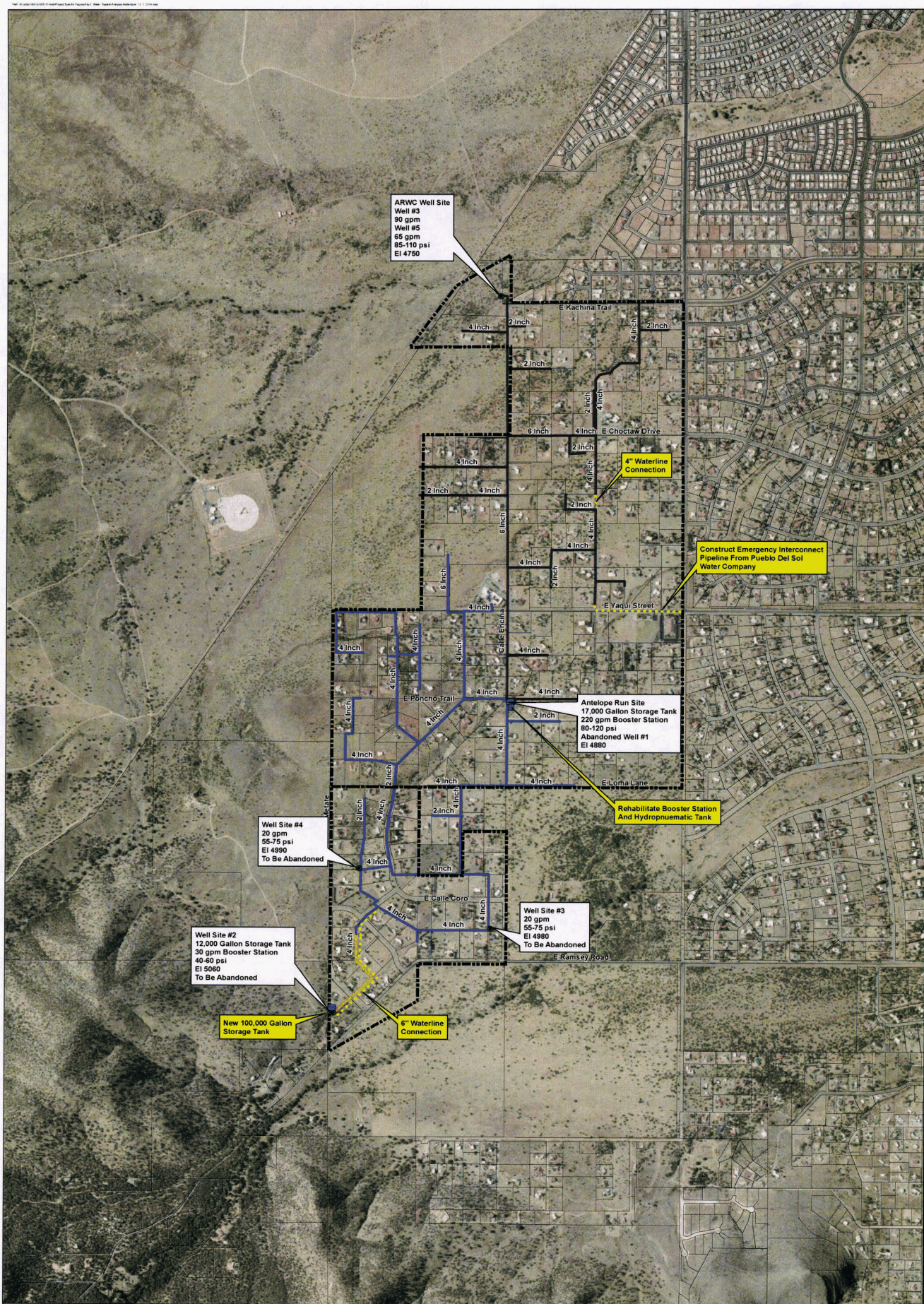




T165, R20E, Portion of Sections 27, 28, 33, 34, & 35,  
T17E, R20E, Portion of Sections 2, 3, & 11  
Coconino County, Arizona  
Datum: NAD 83 & datum UTM 12Q Zone 12Q  
Photo Source: ESRI Online

Legend	
<span style="color: red;">—</span> East Slope Service Area	<span style="color: blue;">■</span> Existing Booster Station
<span style="color: green;">—</span> North Zone	<span style="color: blue;">●</span> Existing Storage Tank
<span style="color: green;">—</span> South Zone	<span style="color: blue;">●</span> Existing Well
<span style="color: blue;">—</span> Well Collection System	<span style="color: blue;">○</span> Normally Closed Valve
<span style="color: red;">---</span> 4 inch Main Replacement	





T166, R20E, Portion of Sections 27, 28, 33, 34, & 35  
 T170, R20E, Portion of Sections 2, 3, & 11  
 Cochise County, Arizona  
 Google Earth Data & Imagery (©2013 Google)  
 Photo Source: ESRI Online

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 www.westlandresources.com

**Legend**

	East Slope Service Area		Storage Tank
	North Zone		Existing Well
	South Zone		Normally Closed Valve
	Hilltop Zone		



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## **APPENDIX A**

### **OPINIONS OF PROBABLE COST**

# WestLand Resources, Inc.

Engineering and Environmental Consultants

**Project Name:** East Slope Water Company  
**Project No.:** 1820.03  
**Location:** Sierra Vista, Arizona  
**Description:** Project Summary - Water Analysis Addendum

**Prepared by:** KDF **Date:** 12/21/2014  
**Checked by:** MDO **Date:** 12/21/2014  
**Client:** East Slope Water Company

Item No.	Item Description					Amount
	Main System					
	Main System Subtotal					\$1,303,438
	West System Subtotal					\$810,625
	TOTAL PROJECT COSTS					\$2,114,063

**WestLand Resources, Inc.**

Engineering and Environmental Consultants

**Project Name:** East Slope Water - Main System  
**Project No.:** 1820.01  
**Location:** Sierra Vista, Arizona  
**Description:** Main System Pipeline

**Prepared by:** KDF **Date:** 12/21/2014**Checked by:** MDO **Date:** 12/21/2014**Client:** East Slope Water Company

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Remarks
1	New 6-inch PVC water line and all appurtenances	LF	7,250	\$65	\$471,250	Well No. 3 to Camino Principal
2	New 6-inch DIP water line and all appurtenances	LF	300	\$85	\$25,500	Well No. 3 to Camino Principal
3	Directional drill under roadways	LF	180	\$250	\$45,000	HDPE water line for Cochise County ROW crossings
4	Tie-ins to existing system throughout project	LS	1	\$35,000	\$35,000	Including 6-inch and 4-inch pipe and all appurtenances
5	Misc. piping tie-overs and replacements between Well Nos. 4 and 1 sites	LS	1	\$22,000	\$22,000	Including main line and service connections
6	PRV station modifications	LS	1	\$15,000	\$15,000	
7	Temporary water lines for construction	LS	1	\$23,000	\$23,000	
8	New 4-inch water line	LF	1,000	\$50	\$50,000	Replace existing 2-inch line, Glenn Road
9	New 6-inch PVC water line and all appurtenances, tie ins, crossings	LF	3,600	\$85	\$306,000	Ramsey Road east of Well No. 3 site
10	Directional drill under roadways	LF	200	\$250	\$50,000	HDPE water line
	<b>Subtotal</b>				<b>\$1,042,750</b>	
	Engineering, Permitting, Construction Services, and Contingencies			25%	\$260,688	
	<b>TOTAL PROJECT COSTS</b>				<b>\$1,303,438</b>	

# WestLand Resources, Inc.

Engineering and Environmental Consultants

**Project Name:** East Slope Water - West System  
**Project No.:** 1820.01  
**Location:** Sierra Vista, Arizona  
**Description:** West System Lower Zone Tank and Upper Zone Booster

**Prepared by:** KDF **Date:** 12/21/2014

**Checked by:** MDO **Date:** 12/21/2014

**Client:** East Slope Water Company

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Remarks
1	Storage tank	LS	1	\$170,000	\$170,000	100,000 gallon tank at Indiada Well No. 2 site
2	Site work and piping	LS	1	\$35,000	\$35,000	At Indiada Well No. 2 site
3	Booster and electrical upgrades	LS	1	\$25,000	\$25,000	At Indiada Well No. 2 site
4	New 6-inch DIP water line and all appurtenances	LF	2,100	\$90	\$189,000	From tank to system, rocky conditions, shallow bury
5	New 6-inch PVC water line and all appurtenances	LF	1,400	\$75	\$105,000	Emergency interconnect from PDS WC
6	Antelope Run booster upgrades	LS	1	\$45,000	\$45,000	
7	Antelope Run hydropneumatic tank upgrade	LS	1	\$20,000	\$20,000	
8	Antelope Run electrical upgrades	LS	1	\$15,000	\$15,000	
9	New 4-inch water line	LF	300	\$65	\$19,500	Minor system interconnect
10	Radio control system	LS	1	\$25,000	\$25,000	
	<b>Subtotal</b>				<b>\$648,500</b>	
	Engineering, Permitting, Construction Services, and Contingencies			25%	\$162,125	
	<b>TOTAL PROJECT COSTS</b>				<b>\$810,625</b>	

Property and easement acquisition costs are excluded from project costs